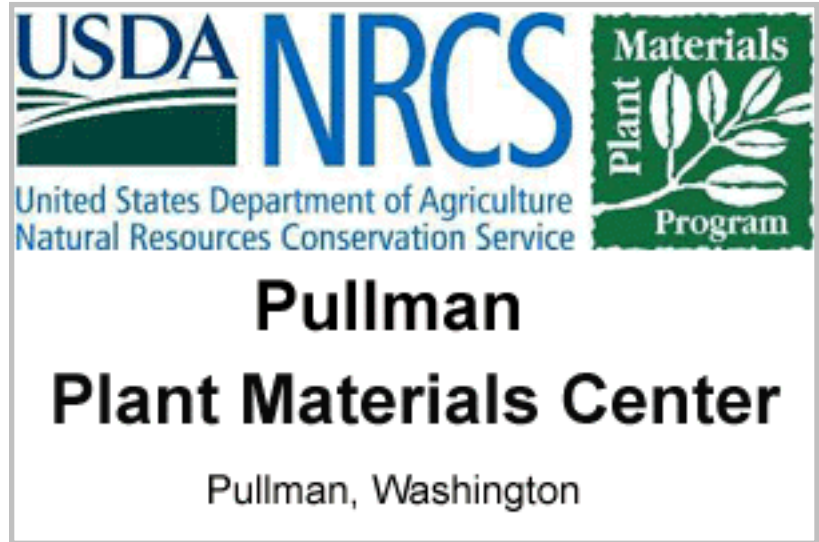


Protocol Information

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Family Scientific Name: **Apiaceae**

Family Common Name: **Parsley or Carrot**

Scientific Name: ***Perideridia gairdneri* (Hook. & Arn.) Mathias**

Common Name: **Gairdner's yampah, Western yampah, False caraway**

Species Code: **PEGA3**

Ecotype: **Paradise Creek drainage near Pullman, Washington.**

General Distribution: **Western North America from British Columbia east to Saskatchewan and south to New Mexico. Mean annual precipitation range is 14-24 inches (USDA NRCS 2006). In eastern Washington it is usually found in open mesic meadows and open forest. Wetland status is FACU (US Fish and Wildlife Service 1988).**

Propagation Goal: **Plants**

Propagation Method: **Seed**

Product Type: **Container (plug)**

Time To Grow: **2 Years**

Propagule Collection: **Fruit is a schizocarp. Seed is collected in September or early October when the inflorescence is dry and the seeds are brown in color. Seed can be stripped from the inflorescence or the entire inflorescence can be clipped from the plant. Harvested seed is stored in paper bags at room temperature until cleaned.**

400,000 seeds/lb (USDA NRCS 2006).

Propagule Processing: **The inflorescence is rubbed by hand to free the seed, then cleaned with an air column separator. Clean seed is stored in controlled conditions at 40 degrees Fahrenheit and 40% relative humidity.**

Pre-Planting Treatments: **Unpublished data from trials conducted at the Pullman Plant Materials Center revealed that no germination occurred without stratification or with 30 days stratification. 60 days of cold, moist stratification resulted in 38% germination. 90 days of cold, moist stratification resulted in 50% germination. 90% germination was obtained from seeds sown in cone-tainers in the fall and left outside under cool, fluctuating spring temperatures. Seedlings which germinated in the greenhouse thrived in the constant warmth, so it is likely the longer stratification time and**

not the cool, fluctuating temperature was the factor in the increased germination.

Growing Area Preparation/
Annual Practices for Perennial Crops:

In October seed is sown in 10 cu. in. Ray Leach Super cell conetainers filled with Sunshine #4 and covered lightly. A thin layer of pea gravel is applied to prevent seeds from floating. Conetainers are watered deeply and placed outside. Conetainers are moved to the greenhouse in February. Alternately, seed can be moist stratified in a refrigerator at 35-40 degrees F for 90 or more days before sowing in the greenhouse.

Establishment Phase: Medium is kept moist until germination occurs. Germination usually begins in 8-10 days and may continue up to 21 days.

Length of Establishment Phase: 3 weeks

Active Growth Phase: Plants are watered deeply every other day and fertilized once per week with a complete, water soluble fertilizer containing micro-nutrients. Plants are moved to the lath house in June. They are watered every other day if the weather is cool, and every day during hot, dry spells. They are fertilized once per week with a water soluble complete fertilizer containing micro-nutrients. Plants will usually not grow beyond the 3-4 true leaf stage the first season. They will often senesce in the late summer. Senescent plants are

given only enough water to prevent the medium from drying completely. Plants are stored in the lath house over winter. They should be afforded some protection from extreme cold temperatures. Mulch or foam sheets provide sufficient protection. The protection should be removed in late winter or early spring as temperatures begin to rise. Plants are grown in containers for a second season in the lath house, then transplanted to the field in late fall while dormant.

Length of Active Growth Phase: **2 seasons**

Hardening Phase: **Since the plants are grown outside, additional hardening is not needed.**

Outplanting performance on typical sites: **Transplanting is done in late October by using an electric drill and portable generator to drill 1.5 inch diameter holes at the planting site. Survival in seed increase plantings without competing vegetation averages 90%. Transplanting into sites with existing vegetation reduces survival and vigor depending on weather conditions following planting. Some plants will flower the year following outplanting, and most will produce seed by the second season.**

Other Comments: **The perennating structure in *Perideridia gairdneri* is a thickened tuber-like portion of the root (Hitchcock & Cronquist 1973). It is likely possible to remove the tuber-like structure from the container and plant it out in the fall, although we have not tried this. This method should only be used for plants growing in cultivation. Plants should not be dug up from stands in the wild. No insect or disease problems have been noted. Viable seed production in wild plants is highly variable between different years and may be related to early frosts occurring before seed maturity.**

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